REMARKS

This amendment is in response to the Official Action mailed on January 24, 2006.

Claims 2, 6, 7, 8, 10, 12, 16, 17, 18, 20, 25, 26 and 28 have been cancelled. Claims 33, 34 and 35 remain withdrawn. New claims 36 to 53 have been added.

The specification has been amended in paragraph 45 to more correctly refer to the lower "surface" of layer 30, rather than the lower "edge" of that layer. Paragraph 49 has been amended to delete the indefinite article "a" prior to "polyester layer 30" (first occurrence). Paragraph 52 has been amended in the last line to add reference numeral 30 following "polyester layer" for greater clarity. Paragraph 55 has been amended to correct the spelling of "embodiments".

Replacement pages 8-10 showing the changes made, and clean pages of the specification are attached.

The applicant appreciates the Examiner's indication that claim 32 would be allowable if rewritten to include all of the limitations of the base claim and any intervening claims. Applicant therefore submits new independent claims 36, 42 and 48 based upon original claims 1, 11 and 21, respectively, each of which has been amended to include the subject matter of claim 32. It is believed that this amendment renders these new claims allowable and it therefore follows of course that the claims dependent thereon are also allowable as well.

Claim 30 has been amended to delete the word "preferably".

Claims 3 and 29 have been amended to recite that the adhesive seals or forms a bead around the glass layer. Support for this amendment can be found in paragraph [0041]. Claims 4, 14 and 22 have been amended to indicate that the glass layer is "approximately" 0.5 mm thick. Support can be found in paragraph [0029]. Claims 5, 15 and 24 have been amended to indicate the polymer layer is "approximately" 0.175 mm thick. Support can be found in paragraph [0032].

Claims 1 to 20 have been rejected as being unpatentable over Divigalpitiya in view of Verlinden. More specifically, the Examiner has objected that Divigalpitiya discloses a flexible membrane and Verlinden discloses such a membrane which is a laminate of ultrathin glass, adhesive and a polymer layer and that the glass layer is smaller than the polymer layer since the glass layer is thicker.

Claims 1, 11 and 21 have each been amended to more clearly define the applicant's invention and to more clearly distinguish the invention over the prior art. More specifically, claim 1 as amended defines a flexible membrane for a resistive touch screen display, said flexible membrane comprising: a glass laminate, wherein said glass laminate consists of: an ultra-thin glass layer having upper and lower surfaces and a peripheral edge therebetween; a polymer layer having upper and lower surfaces and a peripheral edge therebetween; and an adhesive between said glass layer and said polymer layer for bonding the two layers together, said glass layer being smaller than said polymer layer wherein said peripheral edge of said glass layer lies within said peripheral edge of said polymer layer. As thus amended, it is submitted that claim 1, and claims 11 and 21 which have been similarly amended, patentably distinguishes over the prior art.

In particular, applicant has amended claim 1 to clarify that the glass layer is smaller than the polymer layer in terms of its surface area as opposed to its thickness. Claim 1 now recites that the peripheral edge of the glass layer fits within the peripheral edge of the polymer layer. This is significant because as described in the disclosure, the use of a small glass layer facilitates the manufacturing process and affords several unexpected advantages.

The intended use of the glass laminate disclosed by Verlinden is in applications requiring a glass substrate with a functional layer applied to it, for example, liquid crystal displays. Verlinden does not disclose or suggest the glass laminate could be used as a flexible switch layer in a resistive touch screen and such a use is not obvious because Verlinden's laminate is too fragile to be used as a flexible switch layer. According to Verlinden, his preferred glass laminate must be

flexible enough to be wound onto a web roll 1.5 meters or 1500 millimeters in diameter without breaking. A person skilled in the art will realize that the flexible switch layer of a resistive touch screen must be considerably more flexible, particularly around the spacer dots. The glass laminate of the present invention can for example be wound onto a roll of less than 90 millimeters.

The requirement of amended claim 1 that the glass layer be smaller than the polymer layer provides the present glass laminate with more flexibility since there is no glass on the edges to stiffen the polymer layer. Also, the present invention uses a viscous, liquid laminate adhesive and the adhesive is allowed to build up around the edges of the glass layer of the laminate. The beading of the glue is not intended to provide merely more sides to hold the glass as the Examiner asserts on page 4 of his report. Rather, the glue is intended to provide an adhesive fill to stabilize any chips or cracks that may exist at the edges of the glass as this is where the majority of failures happen. Accordingly, the adhesive build up stabilizes the edges of the glass layer and prevents fractures and this in turn affords the greater flexibility of the present laminate. Neither of these aspects is disclosed by Verlinden.

The Examiner's position is that Verlinden implicitly discloses allowing adhesive to be built up around the glass layer, based on the explicit disclosure that an adhesive disposed between two layers is rolled by a laminator (column 6, lines 22-30), and that it would be obvious to modify Divigalpitiya with this teaching. Applicant respectfully disagrees. "Rolling an adhesive between layers" cannot be equated with "allowing excess optical adhesive to build up around the edges of the glass layer" for several reasons. First, Verlinden does not contemplate the use of excessive adhesive, which could be squeezed out and allowed to build up. Second, even if Verlinden did extrude excess adhesive, the adhesive would not build up around the peripheral edge of the glass layer because Verlinden does not disclose a larger lower surface that provides the support for the adhesive to build up on. As aforesaid, the adhesive stabilizes the microfractures and microchips on the edges of the glass layer that arise due to the cutting process, and the fact of the unlaminated edges of the polyester film and the stabilized edges of the glass provides the

applicant's laminate with far greater flexibility than Verlinden which is important in touch screen applications. Simply put, if Verlinden's laminate is "flexible", the present laminate is actually "floppy".

In view of the foregoing, it is respectfully submitted that the subject matter of amended claim 1 is clearly not obvious in view of the cited art and reconsideration is respectfully urged.

The Examiner has cited the combination of Divigalpitiya and Verlinden against the claims dependent from claim 1, but in view of the amendments to claim 1, and applicant's belief that the claim now distinguishes over this combination of references, the dependent claims are also submitted to be in allowable condition.

As aforesaid, claims 11 and 21 have been amended to also require that the glass layer be smaller than the polymer layer and accordingly, for at least the reasons discussed above, it is believed that these claims also clearly and patentably distinguish over the cited art.

The Examiner has rejected claims 21 to 31 as being unpatentable over Divigalpitiya in view of Verlinden in further view of Aufderheide, in further view of Robsky and in further view of Takahata.

Although claim 21 is believed to distinguish over Divigalpitiya and Verlinden for the reasons discussed above, applicant nevertheless wishes to provide additional comments with respect to Robsky and Takahata. Applicant agrees that Aufderheide discloses the use of a pressure sensitive adhesive, but is otherwise not relevant to the subject matter of amended claim 21. The Examiner argues that Robsky discloses an elastic tensioner and it would have been obvious to modify Divigalpitiya with Robsky because the elastic tensioner prevents the first conductive layer of Divigalpitiya from sagging and contacting the second conductive layer. The applicant respectfully disagrees.

The elastic tensioner of the present invention is not used to space the conductive layers as taught by Robsky. Rather, this spacing of the layers in the present invention is accomplished by spacer dots on the substrate layer which is conventional in the art. Applicant's elastic tensioner, unlike Robsky, prevents bunching or sagging of the switch layer via shear pull at the edges of the first conductive layer following a thermal contraction and then expansion. Moreover, Robsky's tensioning is actually the result of the use of cantilevered flexible arms 22 or compressible elements 22c and 22d shown in Figures 9 and 10. As the Examiner will appreciate, these structures are utterly incompatible with the thin profile and conventional construction of touch screen displays used in most if not all terminals. In complete contrast, the present invention as claimed requires that the elastic tensioner be located immediately adjacent the pressure sensitive adhesive between the periphery of the polymer film and the backing surface. This provides the necessary tensioning to prevent sag due to thermal expansions and contractions, and simultaneously provides for the thin, flat construction required in touch screen display terminals which do not have provision for flexible arms 22 or compressible elements such as pads 22c. Accordingly, it is believed that claim 21 clearly and patentably distinguishes over Robsky considered either alone or in combination with the remaining cited art.

The Examiner argues that Takahata discloses a polymer layer extending beyond the periphery of the glass layer in column 5, lines 39-56 and column 7, lines 43-52, and as can also be seen in Figure 1. In fact, Takahata does not teach or suggest the lamination of a polyester and glass film together. Films 6 and 1 are both polymeric. Moreover, comparing films 1 and the actual glass layer, identified by reference numeral 2, it is the glass layer 2 which is the larger and is relatively so much thicker than the polyester film that it will have virtually no flexibility whatsoever. There is nothing therefore in the teachings of Takahata that would motivate the skilled person to combine them with any of the other cited references to reach the combination of claim 21. Reconsideration is therefore respectfully urged.

In view of the foregoing submissions and amendments, the claims now in the application are submitted to clearly and patentably distinguish over the prior art and to be therefore in condition

for allowance. Early and favorable reconsideration towards that end is therefore respectfully requested.

Respectfully submitted,

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June 26, 2006
Date

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